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**REMARKS**

Entry of this response under 37 C.F.R. §1.116 because no new claims or issues are raised and the only claim amendments being existing dependent claim matter being brought into the independent claims.

Claims 1, 2, 5-12, 18, 20-22, 49-51, 56, 57, 60, 65-76, 78-82, 84, 89, 90, and 93 are pending in the application. Claims 19 and 77 have been cancelled while the subject matter therein has been incorporated into claims 1, 2, 49, 50, 51, 56, 57, and 60, respectively. Withdrawn claims 98-109 have been cancelled without prejudice to or disclaimer of the subject matter contained therein.

Applicant gratefully acknowledges the Examiner's indication that claims 76 and 81 would be allowable if rewritten in independent form. Applicant has amended these claims into independent form and, accordingly, Applicant submits that all the claims are allowable.

Claims 1, 5-12, 18-22, 84, 89, and 90 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicant regards as the invention.

Claims 82, 84, 89, 90, and 93 stand rejected under 35 U.S.C. § 101, for being directed to non-statutory subject matter.

Claims 2, 49, 51, 56, 60, 65, 67, 69, 82, 84, 89, and 93 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Jha (U.S. Patent No. 7,161,946). Claims 50 and 90 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Lamberton et al. (U.S. Patent Publication No. 2003/0154259) (hereinafter Lamberton).

Claims 1, 5-7, 9, 11, and 18 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Jha and in view of Oguchi et al. (U.S. Patent Publication 2002/0067725)

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(hereinafter Oguchi). **Claim 55, 66, 71, and 77-80 stand rejected under 35 U.S.C. §103(a)** as being unpatentable over Jha as applied to claim 49 in view of Hama (U.S. Patent Publication 2004/0202171). **Claims 8, 10, 12, and 19-22 stand rejected under 35 U.S.C. §103(a)** as being unpatentable over Jha and in view of Oguchi and further in view of Hama. **Claims 68 and 70 stand rejected under 35 U.S.C. § 103(a)** as being unpatentable over Jha and in view of Chase (U.S. Patent No. 7,257,118). **Claims 72-76 stand rejected under 35 U.S.C. § 103(a)** as being unpatentable over Jha and Hama and in view of Kompella.

Applicants respectfully traverse these rejections in the following discussion.

#### **I. THE CLAIMED INVENTION**

An exemplary aspect of the claimed invention (e.g., as defined by the independent claims including independent claim 1) is directed to a frame transfer method in a network for transferring a data frame sent from a source on the network to a predetermined destination, the method including adding, to the data frame, an expansion tag containing information about forwarding to an egress node to the destination, to make an expansion frame and relaying by one or more nodes on the network, the data frame based on the forwarding information of the added expansion tag, to transfer the frame to the egress node, the node relaying the data frame by using the expansion tag to determine an output port without conducting an MAC address search. In addition, the ingress node in the network has a table which makes an address of the transfer destination and identification information of the egress node correspond with each other and a table which makes identification information of the egress node and output port information correspond with each other. A core node in the network has a table which makes identification information of the egress node and output

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port information correspond with each other. Finally, the egress node has a table which makes an address of the transfer destination and output port information correspond with each other and a table which makes identification information of the egress node and output port information correspond with each other.

Conventional Ethernet nodes determine an output port of an input Ethernet frame based on destination MAC address information. As a result of the destination MAC information being locally defined and 48 bits, every most requires an entry in a frame data base. In addition, a 48-bit complete matching search is required to determine an output port.

The claimed invention, however, includes, "an expansion tag containing information about forwarding to an egress node to the destination to make an expansion frame, and relaying the data frame based on the forwarding information of the added expansion tag to transfer the frame to the egress node by each node on the network," and "said node relaying said data frame by using said expansion tag to determine an output port without conducting an MAC address search," as recited in claim 1. This is important for speeding up and simplifying the search for the destination MAC address. (See the Application, page 4, lines 1-23) In addition, these frames can be compatible with an existing node and an expansion-tag-compatible node. (See the Application, page 50, lines 14-18)

## II. THE ALLEGED SECTION 112, SECOND PARAGRAPH REJECTION

On page 3 of the Office Action, the Examiner rejects claims 1, 5-12, 18-22, 84, 89, and 90 as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicant regards as the invention. Applicant has amended the claims to obviate these rejections.

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Furthermore, on page 4 of the Office Action, the Examiner alleges that where claim 90 recites, among other things, "receiving an expansion frame with an expansion tag including forwarding information of an ingress node which comprises received said frame added to said data frame to transfer the frame to a path to each node on said network based on said forwarding information of said expansion tag," is confusing. Applicant has amended this claim to clarify the invention. Claim 90 now recites, in part, "receiving an expansion frame with an expansion tag that includes forwarding information about being forwarded to an ingress edge node, said received expansion frame being added to said data frame to transfer the data frame to a path to each node on said network based on said forwarding information of said expansion tag." Accordingly, Applicant submits claim 90 is no longer confusing.

Therefore, Applicant respectfully requests the Examiner to reconsider and withdraw these rejections.

### III. THE ALLEGED SECTION 101 REJECTION

On page 4 of the Office Action, the Examiner rejects claims 82, 84, 89, 90, and 93 as being directed to non-statutory subject matter.

While Applicant completely disagrees, Applicant has amended claims 82, 84, 89, 90, and 93 in order to breathe life into the frame transfer program, in order to expedite prosecution.

Applicant submits that claims directed to storage media storing computer programs are well known and commonly accepted in the art, since the term program connotes a process and since such storage media are objects of manufacture, in view of the holding of *In re Beauregard*, 53 F.3d 1583 (Fed. Cir. 1995) wherein the Commissioner conceded "that computer programs embodied in a tangible medium, such as floppy diskettes, are patentable subject matter under 35 U.S.C. §101 and must be examined under 35 U.S.C. §§ 102 and

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103.” U.S. Patent Number 5,710,578 issued on January 20, 1998, that includes claims directed to a “computer program product.”

Therefore, Applicant respectfully requests the Examiner to reconsider and withdraw these rejections.

#### IV. THE ALLEGED PRIOR ART REFERENCES

Applicant submits that independent claims 1, 2, 49, 50, 51, 56, 57, and 60 have been amended to include the subject matter of their respective dependent claims 19 and 77.

On page 9 of the Office Action, claims 55, 66, 71, and 77-80 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Jha in view of Hama and on page 12 of the Office Action, claims 8, 10, 12, and 19-22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Jha in view of Oguchi and further in view of Hama. Applicants submit, however, there are features recited in the rejected claims that are neither disclosed nor suggested by Jha, Oguchi, or Hama, either alone or in combination.

To establish a *prima facie* case of obviousness, several basic criteria must be met. First, rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness (*In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006) cited with approval in *KSR Int'l. v. Teleflex, Inc.*, 127 S.Ct. 1727 (2007)). In addition, the prior art reference (or references when combined) must still teach or suggest all the claim limitations. *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP 706.02(j).

In particular, the respective independent claims now defines, among other things, that the “ingress node in said network comprises a table which makes an address of said transfer

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destination and identification information of said egress node correspond with each other and a table which makes identification information of said egress node and output port information correspond with each other."

Additionally, the claimed invention recites, among other things, "a core node in said network comprises a table which makes identification information of said egress node and output port information correspond with each other," and that the "egress node comprises a table which makes an address of said transfer destination and output port information correspond with each other and a table which makes identification information of said egress node and output port information correspond with each other."

On the other hand, none of the applied references teach or suggest such these tables that designate destinations. Indeed, the Examiner admits that Jha fails to teach or suggest such an element. Furthermore, the Examiner does not allege that Oguchi teaches these elements. Instead, in attempt to construct the claimed invention, the Examiner alleges that Hama teaches "label and routing tables of edge (PE) routers." Contrary to the Examiner's allegation, however, Hama does not make up for Jha's admitted deficiency. Instead of the claimed tables, Hama teaches label tables and not destination tables.

By having the tables defined as defined in the claims in which "an address of said transfer destination and identification information of said egress node correspond with each other," and a table "which makes identification information of said egress node and output port information correspond with each other," that specify the output-port information which designates the destination, the claimed invention makes a table for label switch unnecessary. That is, the claimed invention is different from the label table and routing tables of Hama. Thus, Hama is directed to a completely different and distinct method of operation and a result

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of this difference, Hama fails to make up for Jha's admitted deficiencies and therefore the alleged combinations do not teach or suggest every element of the claim invention.

Accordingly, as described above, Jha fails to disclose every element as recited in the independent claims and, as admitted by the Examiner and Oguchi and Hama each fails to make up for Jha's deficiencies.

Furthermore, the Examiner has improperly combined Jha and Hama because the Examiner has improperly applied a hindsight rationale for combining Hama and Jha. That is, without "some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness," the Examiner is clearly relying on Applicant's own invention and therefore has improperly rejected the invention under 35 U.S.C. §103(b).

Because the alleged combinations of Jha, Oguchi, and Hama each fails to teach or suggest every element as claimed in the independent claims, independent claims 1, 2, 49-51, 56, 57, 60, 84, 89, 90, and 93 are improperly rejected in light of Jha and Hama. Accordingly, Applicant submits that these claims are in condition for allowance.

With respect to claims 5-12, 18-22, and 65-82, which depend from independent claims 1 and 49 respectively, each of these claims contains all the limitations contained within independent claims 1 and 49 and are therefore are also in condition for allowance.

Therefore, Applicants respectfully request the Examiner to reconsider and withdraw these rejections.

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# **V. FORMAL MATTERS AND CONCLUSION**


In view of the foregoing, Applicants submits that claims 1, 2, 5-12, 18-22, 49-51, 56, 57, 60, 65-82, 84, 89, 90, and 93, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

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Respectfully Submitted,

  
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